

# Javier Murillo

## List of Publications by Year in descending order

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54  
papers

1,693  
citations

236925

25  
h-index

302126

39  
g-index

54  
all docs

54  
docs citations

54  
times ranked

919  
citing authors

#	ARTICLE	IF	CITATIONS
1	Weak solutions for partial differential equations with source terms: Application to the shallow water equations. <i>Journal of Computational Physics</i> , 2010, 229, 4327-4368.	3.8	141
2	Influence of mesh structure on 2D full shallow water equations and SCS Curve Number simulation of rainfall/runoff events. <i>Journal of Hydrology</i> , 2012, 448-449, 39-59.	5.4	80
3	An Exner-based coupled model for two-dimensional transient flow over erodible bed. <i>Journal of Computational Physics</i> , 2010, 229, 8704-8732.	3.8	78
4	Augmented versions of the HLL and HLLC Riemann solvers including source terms in one and two dimensions for shallow flow applications. <i>Journal of Computational Physics</i> , 2012, 231, 6861-6906.	3.8	73
5	An optimized GPU implementation of a 2D free surface simulation model on unstructured meshes. <i>Advances in Engineering Software</i> , 2014, 78, 1-15.	3.8	70
6	A 2D weakly-coupled and efficient numerical model for transient shallow flow and movable bed. <i>Advances in Water Resources</i> , 2014, 71, 93-109.	3.8	69
7	The influence of source terms on stability, accuracy and conservation in two-dimensional shallow flow simulation using triangular finite volumes. <i>International Journal for Numerical Methods in Fluids</i> , 2007, 54, 543-590.	1.6	68
8	Friction term discretization and limitation to preserve stability and conservation in the 1D shallow-water model: Application to unsteady irrigation and river flow. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 58, 403-425.	1.6	55
9	Coupling between shallow water and solute flow equations: analysis and management of source terms in 2D. <i>International Journal for Numerical Methods in Fluids</i> , 2005, 49, 267-299.	1.6	46
10	Wave Riemann description of friction terms in unsteady shallow flows: Application to water and mud/debris floods. <i>Journal of Computational Physics</i> , 2012, 231, 1963-2001.	3.8	46
11	GPU implementation of the 2D shallow water equations for the simulation of rainfall/runoff events. <i>Environmental Earth Sciences</i> , 2015, 74, 7295-7305.	2.7	44
12	A conservative 2D model of inundation flow with solute transport over dry bed. <i>International Journal for Numerical Methods in Fluids</i> , 2006, 52, 1059-1092.	1.6	43
13	2D simulation of granular flow over irregular steep slopes using global and local coordinates. <i>Journal of Computational Physics</i> , 2013, 255, 166-204.	3.8	43
14	Analysis of a second-order upwind method for the simulation of solute transport in 2D shallow water flow. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 56, 661-686.	1.6	42
15	Verification, conservation, stability and efficiency of a finite volume method for the 1D Richards equation. <i>Journal of Hydrology</i> , 2013, 480, 69-84.	5.4	40
16	Generalized Roe schemes for 1D two-phase, free-surface flows over a mobile bed. <i>Journal of Computational Physics</i> , 2008, 227, 10058-10077.	3.8	39
17	A finite volume method for the simulation of the waves generated by landslides. <i>Journal of Hydrology</i> , 2009, 373, 273-289.	5.4	36
18	Accurate numerical modeling of 1D flow in channels with arbitrary shape. Application of the energy balanced property. <i>Journal of Computational Physics</i> , 2014, 260, 222-248.	3.8	35

#	ARTICLE	IF	CITATIONS
19	Time step restrictions for well-balanced shallow water solutions in non-zero velocity steady states. <i>International Journal for Numerical Methods in Fluids</i> , 2009, 60, 1351-1377.	1.6	32
20	Numerical assessment of bed-load discharge formulations for transient flow in 1D and 2D situations. <i>Journal of Hydroinformatics</i> , 2013, 15, 1234-1257.	2.4	32
21	Analysis of the Friction Term in the One-Dimensional Shallow-Water Model. <i>Journal of Hydraulic Engineering</i> , 2007, 133, 1048-1063.	1.5	31
22	Conservative numerical simulation of multi-component transport in two-dimensional unsteady shallow water flow. <i>Journal of Computational Physics</i> , 2009, 228, 5539-5573.	3.8	31
23	Energy balance numerical schemes for shallow water equations with discontinuous topography. <i>Journal of Computational Physics</i> , 2013, 236, 119-142.	3.8	31
24	Extension of an explicit finite volume method to large time steps ( $CFL > 1$ ): application to shallow water flows. <i>International Journal for Numerical Methods in Fluids</i> , 2006, 50, 63-102.	1.6	27
25	Energy balanced numerical schemes with very high order. The Augmented Roe Flux ADER scheme. Application to the shallow water equations. <i>Journal of Computational Physics</i> , 2015, 290, 188-218.	3.8	27
26	Fertigation in Furrows and Level Furrow Systems. I: Model Description and Numerical Tests. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2009, 135, 401-412.	1.0	26
27	A large time step 1D upwind explicit scheme ( $CFL > 1$ ): Application to shallow water equations. <i>Journal of Computational Physics</i> , 2012, 231, 6532-6557.	3.8	25
28	An efficient GPU implementation for a faster simulation of unsteady bed-load transport. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2016, 54, 275-288.	1.7	25
29	Two-dimensional depth-averaged modelling of dam-break flows over mobile beds. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2013, 51, 392-407.	1.7	24
30	The formulation of internal boundary conditions in unsteady 2D shallow water flows: Application to flood regulation. <i>Water Resources Research</i> , 2013, 49, 471-487.	4.2	24
31	An efficient solution for hazardous geophysical flows simulation using GPUs. <i>Computers and Geosciences</i> , 2015, 78, 63-72.	4.2	23
32	2D dry granular free-surface flow over complex topography with obstacles. Part I: experimental study using a consumer-grade RGB-D sensor. <i>Computers and Geosciences</i> , 2014, 73, 177-197.	4.2	22
33	Finite volumes for 2D shallow-water flow with bed-load transport on unstructured grids. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2012, 50, 154-163.	1.7	21
34	A model based on Hirano-Exner equations for two-dimensional transient flows over heterogeneous erodible beds. <i>Advances in Water Resources</i> , 2016, 87, 1-18.	3.8	20
35	Experimental and numerical simulation of bed load transport over steep slopes. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2017, 55, 455-469.	1.7	20
36	Fertigation in Furrows and Level Furrow Systems. II: Field Experiments, Model Calibration, and Practical Applications. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2009, 135, 413-420.	1.0	19

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37	2D dry granular free-surface transient flow over complex topography with obstacles. Part II: Numerical predictions of fluid structures and benchmarking. <i>Computers and Geosciences</i> , 2014, 73, 142-163.	4.2	19
38	A Riemann solver for unsteady computation of 2D shallow flows with variable density. <i>Journal of Computational Physics</i> , 2012, 231, 4775-4807.	3.8	18
39	Preprocess static subdomain decomposition in practical cases of 2D unsteady hydraulic simulation. <i>Computers and Fluids</i> , 2013, 80, 225-232.	2.5	17
40	A Roe type energy balanced solver for 1D arterial blood flow and transport. <i>Computers and Fluids</i> , 2015, 117, 149-167.	2.5	16
41	Numerical boundary conditions for globally mass conservative methods to solve the shallow-water equations and applied to river flow. <i>International Journal for Numerical Methods in Fluids</i> , 2006, 51, 585-615.	1.6	15
42	Improved Riemann solvers for complex transport in two-dimensional unsteady shallow flow. <i>Journal of Computational Physics</i> , 2011, 230, 7202-7239.	3.8	15
43	Numerical modelling of bridges in 2D shallow water flow simulations. <i>International Journal for Numerical Methods in Fluids</i> , 2014, 75, 250-272.	1.6	15
44	Computational hemodynamics in arteries with the one-dimensional augmented fluid-structure interaction system: viscoelastic parameters estimation and comparison with in-vivo data. <i>Journal of Biomechanics</i> , 2020, 100, 109595.	2.1	15
45	Modelling sediment deposition and phosphorus retention in a river floodplain. <i>Hydrological Processes</i> , 2015, 29, 384-394.	2.6	14
46	Preserving bounded and conservative solutions of transport in one-dimensional shallow water flow with upwind numerical schemes: Application to fertigation and solute transport in rivers. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 56, 1731-1764.	1.6	13
47	2D modelling of erosion/deposition processes with suspended load using. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2008, 46, 99-112.	1.7	10
48	Transient Two-Dimensional Simulation of Real Flood Events in a Mediterranean Floodplain. <i>Journal of Hydraulic Engineering</i> , 2012, 138, 629-641.	1.5	10
49	A Solution of the Junction Riemann Problem for 1D Hyperbolic Balance Laws in Networks including Supersonic Flow Conditions on Elastic Collapsible Tubes. <i>Symmetry</i> , 2021, 13, 1658.	2.2	4
50	Accurate and efficient simulation of transport in multidimensional flow. <i>International Journal for Numerical Methods in Fluids</i> , 2011, 65, 405-431.	1.6	3
51	Modelos de simulaci3n de alto orden para la resoluci3n de fen3menos de propagaci3n de ondas en flujos de l3mina libre con turbulencia. <i>Ingenier3a Del Agua</i> , 2019, 23, 275.	0.4	1
52	Coupled method for the numerical simulation of 1D shallow water and Exner transport equations in channels with variable cross-section. <i>E3S Web of Conferences</i> , 2018, 40, 05012.	0.5	0
53	Numerical shockwave anomalies in the resolution of the Shallow Water Equations with bed variations. <i>E3S Web of Conferences</i> , 2018, 40, 05026.	0.5	0
54	EFFICIENT TWO-DIMENSIONAL SIMULATION MODELS FOR HYDRAULIC AND MORPHODYNAMIC TRANSIENTS. , 2016, , .		0